TENNESSEE AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-1531

Permit to Construct or Modify an Air Contaminant Source Issued Pursuant to Tennessee Air Quality Act

Date Issued: April 16, 2004

Permit Number: 956292P

Date Expires: April 16, 2007

Issued To:
A.E. Staley Manufacturing Company

Installation Address:
198 Blair Bend Drive
Loudon, Tenn.

Installation Description:
Propanediol Production
Source No. 72 – Fermentation Process
Source No. 73 – Evaporation and Biomass Dryer
Source No. 74 - Hydrogenation and Distillation

Emission Source Reference No.'s
53-0081-72, 73 and 74

The holder of this permit shall comply with the conditions contained in this permit as well as all applicable provisions of the Tennessee Air Pollution Control Regulations.

CONDITIONS:

1. The application that was utilized in the preparation of this permit is dated April 2, 2003, with amendments dated March 25, 2004, and March 26, 2004, and signed by Michael J. Slimbarski, Plant Manager for the permitted facility. If this person terminates employment or is reassigned different duties such that they are no longer the responsible person to represent and bind the facility in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification shall be in writing and submitted within thirty (30) days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the facility in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

(conditions continued on next page)

TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

NON-TRANSFERABLE **POST AT INSTALLATION ADDRESS**

Conditions 2 through 14 apply to all sources in this permit unless otherwise noted.

2. The maximum input capacity for these sources shall not exceed the amount as given in the approved confidential application dated April 2, 2003.

3. Volatile Organic Compound (VOC) emissions from the stacks identified in Conditions 15, 19, 20, 23 and 24 shall not exceed 21 Tons during any 12 consecutive month period.

4. A log of the material input and VOC emissions for these sources in a form that readily shows compliance with Condition's 2 and 3 respectively, must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. This log must be retained for a period of not less than five years.

5. No later than three hundred sixty five (365) days after initial start-up, the owner or operator shall furnish the Technical Secretary a written report of the results of a source emissions test for the Volatile Organic Compounds, Ammonia, and Hazardous Air Pollutants emitted from the stacks as specified in Condition's 15, 16, 17, 19, 20, 21, 23 and 24. The source emissions test shall be conducted and data reduced in accordance with methods and procedures approved by the Technical Secretary.

6. At least thirty (30) days prior to conducting the source emissions test, the Technical Secretary shall be given notice of the test in order to afford him the opportunity to have an observer present.

7. At least ninety (90) days prior to conducting the source emissions testing, the permittee must submit a test protocol to the Technical Secretary for approval. The test protocol must include a description of the testing methodologies proposed to be utilized and a listing of the process and control equipment parameters proposed to be monotored during the testing period. Written approval of the testing protocol must be obtained prior to the actual testing.

8. Data from the source emissions testing will be used to identify control equipment parameters to be monitored to assure compliance with the applicable emission limits. The permittee shall continue to monitor the parameters listed in the approved testing protocol after the testing period to assure compliance with the applicable emission limits.

9. The permittee must submit a Title V operating permit application within three hundred sixty five (365) days of initial start-up for these sources.

10. These sources are subject to the requirements of the National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing, 40 CFR 63 Subpart FFFF.

11. The revised overfire air system for Boilers #1 and #2, as described in the Minor Permit Modification dated March 26, 2004, shall be operational May 31, 2004. After that date the average nitrogen oxides emissions from these two boilers shall not exceed 0.35 pounds per million Btu heat input and 736 Tons during any 12 consecutive month period. The imposition of this emission limit provides sufficient emission offsets to allow for the operation of PES 72, PES 73, and PES 74 without the necessity for a prevention if significant deterioration review pursuant to Division Rule 1200-3-9-.01 (4). Compliance with this condition shall be determined by the continuous in-stack nitrogen oxides monitoring systems currently installed on the effluent gas streams of both boilers.

(conditions continued on the next page)

12. Visible emissions from this source shall not exhibit greater than twenty percent (20%) opacity as determined by EPA Method 9, as published in the Federal Register, Volume 39, Number 219 on November 12, 1974. (six-minute average)

13. Routine maintenance, as required to maintain specified emission limits, shall be performed on the air pollution control device(s). Maintenance records shall be recorded in a suitable permanent form and kept available for inspection by the Division. These records must be retained for a period of not less than five years.

14. The permittee shall certify the start-up date of the air contaminant source regulated by this permit by submitting

A COPY OF ALL PAGES OF THIS PERMIT,

with the information required in A) and B) of this condition completed, to the Technical Secretary's representatives listed below:

DATE OF START-UP: _____ / ____ / _____
month day year

Anticipated operating rate: ____ percent of maximum rated capacity

For the purpose of complying with this condition, "start-up" of the air contaminant source shall be the date of the setting in operation of the source for the production of product for sale or use as raw materials or steam or heat production.

The undersigned represents that he/she has the full authority to represent and bind the permittee in environmental permitting affairs. The undersigned further represents that the above provided information is true to the best of his/her knowledge and belief.

Signature		Date
Signer's name (type or print)	Title	Phone (with area code)

Note: This certification is not an application for an operating permit. At a minimum, the appropriate application form(s) must be submitted requesting an operating permit. The application must be submitted in accordance with the requirements of this permit.

The completed certification shall be delivered to the Compliance Validation Program and the Environmental Assistance Center at the addresses listed below, no later than thirty (30) days after the air contaminant source is started-up.

Compliance Validation Program
Division of Air Pollution Control
9th Floor, L & C Annex
401 Church Street
Nashville, TN 37243-1531

Knoxville Environmental Assistance Center
Division of Air Pollution Control
2700 Middlebrook Pike
Knoxville, TN 37921

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53-0081-72 **FERMENTATION PROCESS:**
FERMENTATION PROCESS TANKS with reactive bioscrubber control
CONDITIONS 15 – 18

15. Volatile Organic Compounds emitted from the fermentation process reactive bioscrubber stack shall not exceed 15 Tons during any 12 consecutive month period.

16. Ammonia emitted from the fermentation process reactive bioscrubber stack shall not exceed 7.0 Tons during any 12 consecutive month period.

17. Acetaldehyde emitted from the fermentation process reactive bioscrubber stack shall not exceed 0.5 Tons during any 12 consecutive month period.

18. Compliance with Conditions 15, 16, and 17 will be assured by the operation of the pollution control equipment (a reactive bioscrubber) used by this source and operation of this source within the parameters established by the source emissions test. In the event a malfunction/failure of this control device(s) occurs, the operation of the process controlled by this control device(s) shall be regulated by the provisions of Chapter 1200-3-20 of the Tennessee Air Pollution Control Regulations.

53-0081-73 **SEPARATION PROCESS:**
EVAPORATOR with no control
BIOMASS DRYER with scrubber control with water as scrubber media
CONDITIONS 19 – 22

19. Volatile Organic Compounds emitted from the evaporator process stack shall not exceed 2.0 Tons during any 12 consecutive month period.

20. Volatile Organic Compounds emitted from the biomass dryer process scrubber stack shall not exceed 1.0 Tons during any 12 consecutive month period.

21. Ammonia emitted from the biomass dryer process scrubber stack shall not exceed 1.2 Tons during any 12 consecutive month period.

22. Compliance with Condition 20 and 21 will be assured by the operation of the pollution control equipment (a wet scrubber) used by this source and operation of this source within the parameters established by the source emissions test. In the event a malfunction/failure of this control device(s) occurs, the operation of the process controlled by this control device(s) shall be regulated by the provisions of Chapter 1200-3-20 of the Tennessee Air Pollution Control Regulations.

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53-0081-74

REFINERY PROCESS:
HYDROGENATION REACTOR with no control
DISTILLATION COLUMNS, scrubber control
with water as scrubber media
CONDITIONS 23 – 25

23. Volatile Organic Compounds emitted from the hydrogenation stack shall not exceed 2.0 Tons during any 12 consecutive month period.

24. Volatile Organic Compounds emitted from the distillation scrubber stack shall not exceed 0.5 Tons during any 12 consecutive month period.

25. Compliance with Condition 24 will be assured by the operation of the pollution control equipment (a wet scrubber) used by this source within the parameters established by the source emissions test. In the event a malfunction/failure of this control device(s) occurs, the operation of the process controlled by this control device(s) shall be regulated by the provisions of Chapter 1200-3-20 of the Tennessee Air Pollution Control Regulations.

(end of conditions)

The permit application gives the location of this source as 35°44’04” Latitude and 84°19’20” Longitude.